12HG7

Sharp-Cutoff Pentode

FRAME-GRID CONSTRUCTION **T9 ENVELOPE**

9-PIN LARGE-BUTTON NEONOVAL BASE

For Video Output Amplifier Service in Color TV Receivers

Electrical:

Heater Characteristics and Ratings:

	Series	Parallel	
Heater-section arrangement	Series	Parallel	
Voltage (AC or DC)	12.6 ± 1.3[a]	6.3 ± 0.6	volts
Current	0.260	0.520[b]	amp
Maximum heater-cathode voltage:			
Heater negative with respect to cathode		200	volts
Heater positive with respect to cathode:			
Peak		200	volts
DC component		100	volts

Direct Interelectrode Capacitances:[c]

Grid No.1 to plate	0.15 max.	pf
Input: G1 to (K,G3 + IS,G2,H)	14.0	pf
Output: P to (K,G3 + IS,G2,H)	4.4	pf

Mechanical:

Operating Position . . . . Any
Type of Cathode . . . . Coated Unipotential
Maximum Overall Length. . . . . 2.930"
Maximum Seated Length . . . . 2.620"
Length, Base Seat to Bulb Top (Excluding tip). . 2.070" to 2.310"
Diameter. . . . . 1.062" to 1.188"
Dimensional Outline . . . . (JEDEC No.9-70)
Bulb. T9
Base. . . . . . .Large-Button Neonoval 9-Pin (JEDEC No.E9-68)
Basing Designation for BOTTOM VIEW. 9BF

Pin 1 - Cathode
Pin 2 - Grid No.1
Pin 3 - Grid No.3, Internal Shield
Pin 4 - Heater
Pin 5 - Heater
Pin 6 - Heater Tap
Pin 7 - Plate
Pin 8 - Grid No.2
Pin 9 - Grid No.3, Internal Shield

H, H, HM, G3 IS, P, G1, G2, K, G3,IS

Characteristics, Class A₁ Amplifier:

Plate Supply Voltage	300	volts
Grid No.3	Connected to cathode at socket	
Grid-No.2 Supply Voltage	135	volts
Grid No.1	Connected to negative end of cathode resistor	
Cathode Resistor	47	ohms
Plate Resistance (Approx.)	60000	ohms
Transconductance	32000	µmhos
Plate Current	31	ma

Grid-No.2 Current	4.8	ma
Grid-No.1 Voltage (Approx.) for plate μa = 100	-4.5	volts

CLASS A1 AMPLIFIER

Maximum Ratings, *Design-Maximum Values:*

Plate Voltage	400	volts
Grid-No.2 (Screen-Grid) Supply Voltage	330	volts
Grid-No.2 Voltage	See *Grid-No.2 Input Rating Chart* at front of Receiving Tube Section	
Grid-No.1 (Control-Grid) Voltage:		
Positive-bias value	0	volts
Grid-No.2 Input:		
For grid-No.2 voltages up to 165 volts	1	watt
For grid-No.2 voltages between 165 and 330 volts	See *Grid-No.2 Input Rating Chart* at front of Receiving Tube Section	
Plate Dissipation	10	watts

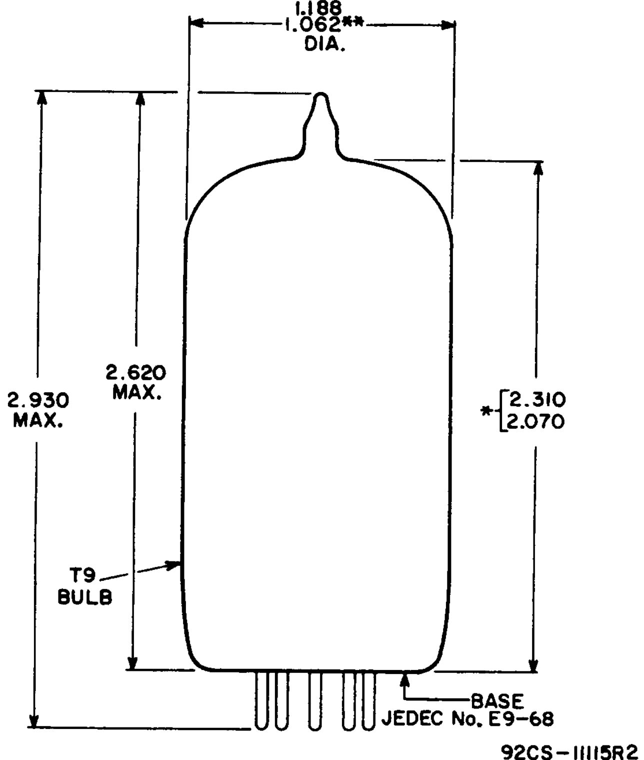
Maximum Circuit Values:

Grid-No.1-Circuit Resistance:		
For fixed-bias operation	0.1	megohm
For cathode-bias operation	0.25	megohm

[a] At heater amperes = 0.260.
[b] At heater volts = 6.3.
[c] Without external shield.

DIMENSIONAL OUTLINE

JEDEC No. 9-70

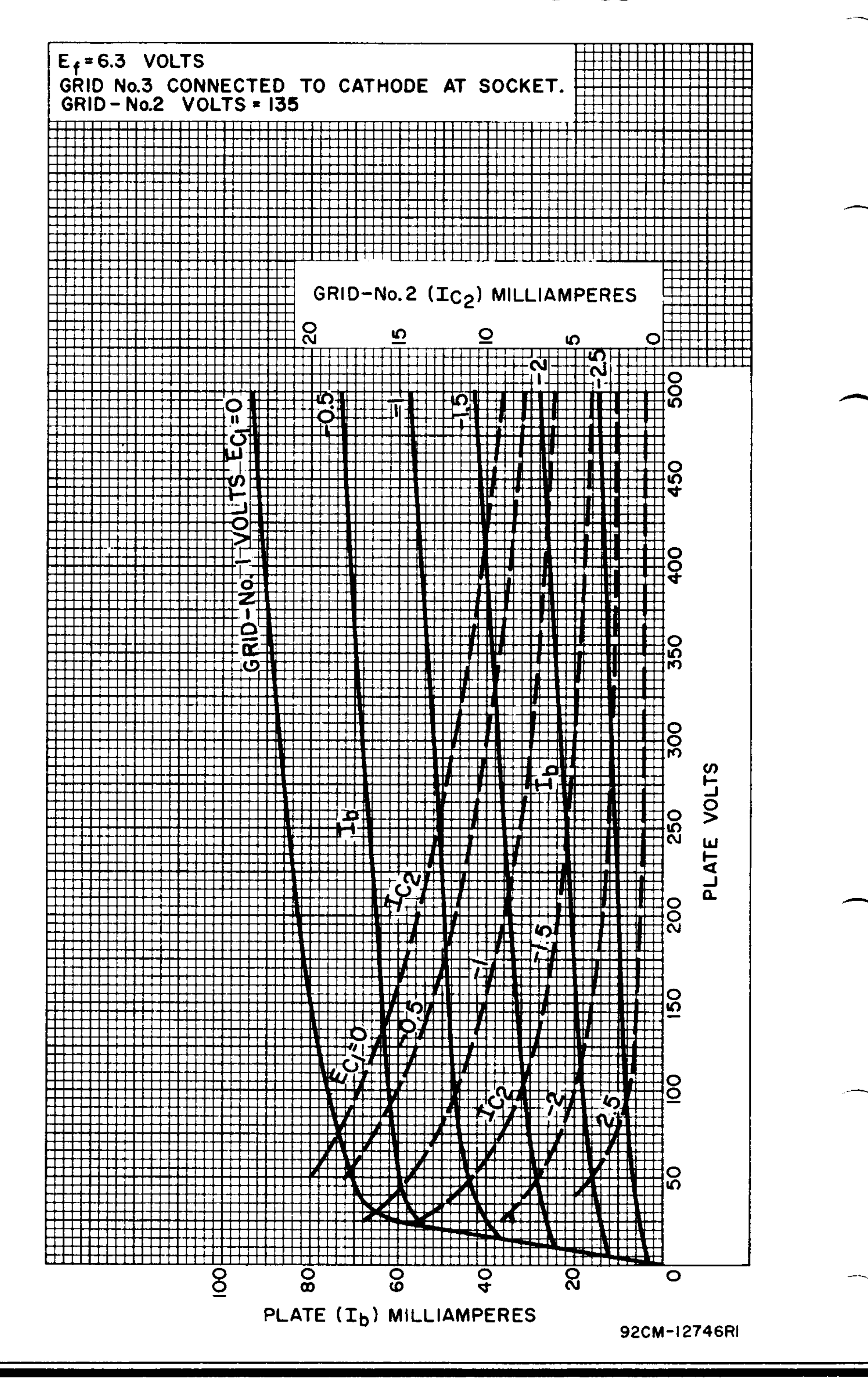


DIMENSIONS IN INCHES

** Applies in zone starting 0.375" from base seat.

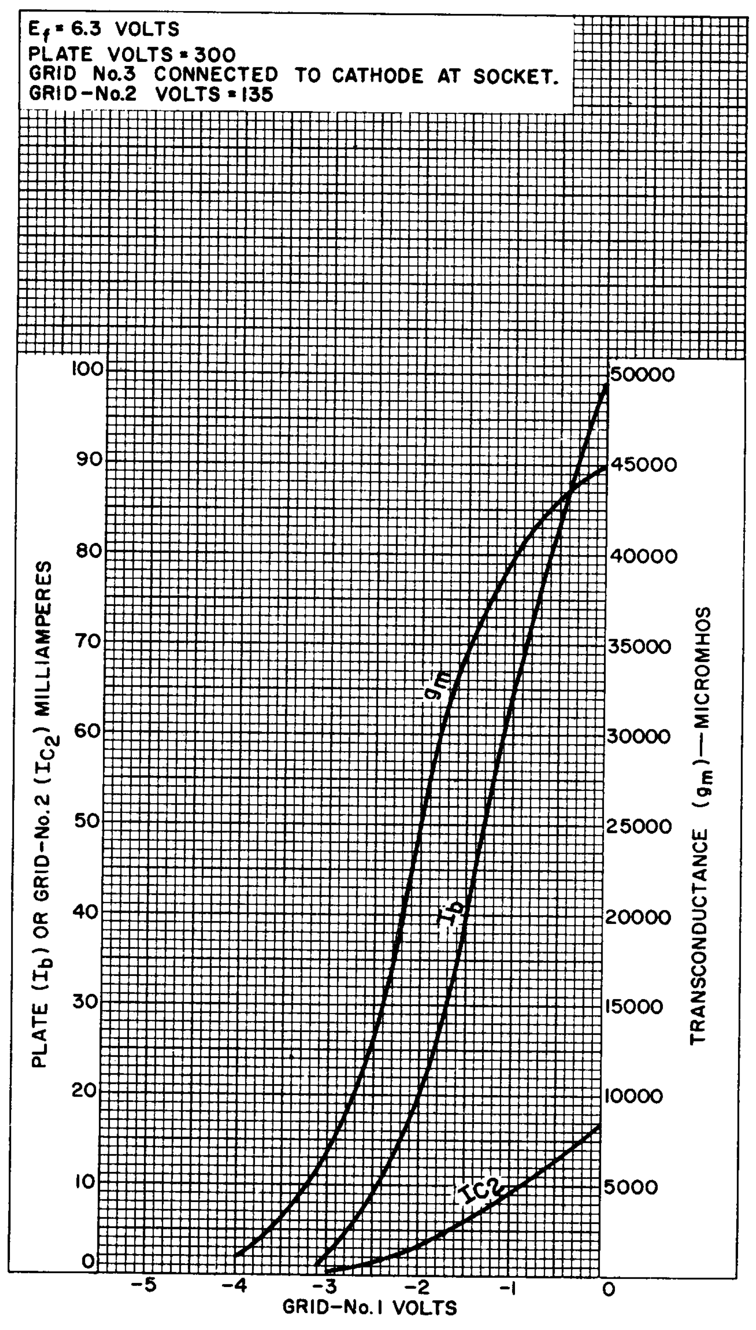
* Measured from base seat to bulb-top line as determined by a ring gauge of 0.600" inside diameter.

AVERAGE CHARACTERISTICS



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92CM-12747R1